

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 6, 7, and 11 in accordance with the following:

1. (CURRENTLY AMENDED) A communication system for performing optical communications, comprising:

(a) a WDM device for providing supervisory control channels for supervising optical communications, said supervisory control channels including a first optical supervisory channel whose transmission band falls outside of the transmission band for main optical signals, and a second supervisory channel whose transmission band falls ~~in an idle band in the transmission band~~ for said main optical signals, said WDM device ~~including~~comprising:

~~supervisory control channel setting means for variably setting said supervisory control channels, said variable setting including selection of an idle band wavelength for the second supervisory channel, and~~

WDM transmitting means for wavelength-multiplexing and -demultiplexing said supervisory control channels and said main optical signals; ~~and signals,~~

incoming wavelength selection means coupled to an input side of said WDM transmitting means for selecting a first wavelength to receive an incoming signal of the second supervisory channel,

outgoing wavelength selection means coupled to an output side of said WDM transmitting means for selecting a second wavelength to transmit an outgoing signal of the second supervisory channel, and

supervisory control channel setting means for variably setting the second supervisory control channel according to given setting information, including independent selection of the first and second wavelengths for the incoming and outgoing signals of the second supervisory channel; and

(b) a network managing device comprising:

setting information indicating means for indicating the setting information for setting said supervisory control channels to said WDM device, the setting information including wavelength information that specifies which idle-band wavelength to select for use as the

second optical supervisory channel at the supervisory control channel setting means, and
operating state managing means for managing a network operating state.

2. (PREVIOUSLY PRESENTED) The communication system according to claim 1, wherein said setting information further includes:

section information setting a section for which said second optical supervisory channel is to be used, and

time information setting a time zone in which said second optical supervisory channel is to be used.

3. (ORIGINAL) The communication system according to claim 1, wherein said supervisory control channel setting means comprises means for using said first optical supervisory channel for indicating said setting information between WDM devices and using at least one of said first optical supervisory channel and said second optical supervisory channel for transmitting operation control information.

4. (ORIGINAL) The communication system according to claim 1, wherein said WDM transmitting means comprises means for performing a switching control process with an optical signal system or an electric signal system and wavelength-multiplexing and -demultiplexing said main optical signals and said supervisory control channels.

5. (PREVIOUSLY PRESENTED) The communication system according to claim 1, further comprising:

a repeater controlling an amplification process of an internal repeater amplifier based on information of the supervisory control channels, multiplexing supervisory control channels with its own state information and said main optical signals, and transmitting a multiplexed signal.

6. (CURRENTLY AMENDED) A WDM device for performing WDM optical communications, comprising:

WDM transmitting means for wavelength-multiplexing and -demultiplexing said supervisory control channels and said main optical signals;

incoming wavelength selection means coupled to an input side of said WDM transmitting means for selecting a first wavelength to receive an incoming signal of the second supervisory channel;

outgoing wavelength selection means coupled to an output side of said WDM transmitting means for selecting a second wavelength to transmit an outgoing signal of the second supervisory channel; and

supervisory control channel setting means for providing supervisory control channels for supervising optical communications, said supervisory control channels including a first optical supervisory channel whose transmission band falls outside of the transmission band for main optical signals, and a second supervisory channel whose transmission band falls in an idle band in the transmission band for said main optical signals, and variably setting ~~said the second supervisory control channel channels, said variable setting including selection of an idle band wavelength for use as said second supervisory channel~~ independent selection of the first and second wavelengths for the incoming and outgoing signals of the second supervisory channel according to wavelength information provided from an external source; and source WDM transmitting means for wavelength multiplexing and demultiplexing said supervisory control channels and said main optical signals.

7. (CURRENTLY AMENDED) A network managing device for managing a network, comprising:

setting information indicating means for indicating, to a WDM device, setting information for setting supervisory control channels for supervising optical communications, said supervisory control channels including a first optical supervisory channel whose transmission band falls outside of the transmission band for main optical signals, and a second supervisory channel whose transmission band falls in an idle band in the transmission band for said main optical signals, the setting information including wavelength information that ~~specifies which idle band wavelength said WDM device should select for use as said second optical supervisory channel; and~~ commands said WDM device to select a first wavelength for receiving an incoming signal of the second supervisory channel, as well as to select a second wavelength, independently of said selection of the second wavelength, for transmitting an outgoing signal of the second supervisory channel; and

operating state managing means for managing a network operating state.

8. (PREVIOUSLY PRESENTED) A communication system for performing optical communications, comprising:

a WDM device comprising supervisory control channel setting means for variably setting supervisory control channels including selection of an idle-band wavelength for a second

supervisory channel, and

a network managing device including setting information indicating means for setting supervisory control channels to said WDM device, the setting information including wavelength information that specifies which idle-band wavelength to select for use as the second optical supervisory channel at the supervisory control channel setting means.

9. (PREVIOUSLY PRESENTED) The communication system according to claim 8, wherein said supervisory control channel setting means comprises means for using a first optical supervisory channel for indicating said setting information between WDM devices and using said first optical supervisory channel and said second optical supervisory channel for transmitting operation control information.

10. (PREVIOUSLY PRESENTED) A method of optical communications, comprising: providing supervisory control channels supervising optical communications including a first optical supervisory channel whose transmission band falls outside of the transmission band of main optical signals, and a second supervisory channel whose transmission band falls in an idle band in the transmission band of said main optical signals,

variably setting the supervisory control channels and selecting an idle-band wavelength for the second supervisory channel;

wavelength-multiplexing and -demultiplexing the supervisory control channels and the main optical signals;

indicating setting information setting the supervisory control channels and specifying which idle-band wavelength to select as the second optical supervisory channel, and

managing a network operating state.

11. (CURRENTLY AMENDED) The method according to claim ~~4~~11, using said first optical supervisory channel to indicate setting information between WDM devices and using the first optical supervisory channel and the second optical supervisory channel to transmit operation control information.